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|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| KS1 Computing | **Computer systems and networks – IT and Technology around us**  This combines the year 1 and year 2 units for ‘computer systems and networks’ from Teach Computing and the same pieces of procedural and declarative knowledge are taught in both cycles due to the importance of the knowledge: underpinning the rest of the computing curriculum. It is expected that by the end of year 2 all children will know and remember the key knowledge outlined. | **Creating Media – Digital Painting**  Learners should be familiar with:  How to switch their device on  Usernames  Passwords  Learners have benefited from completing the Year 1 Computing Systems & Networks unit prior to this unit. | **Programming A – Programming a robot**  This unit helps to build students’ knowledge and understanding of giving and following instructions. It moves from giving instructions to each other to giving instructions to a robot by programming it. | **Data and information – Grouping data and Pictograms**  This combines the year 1 and 2 Data and Information Units. Some of the year 1 objectives are covered within the EYFS White rose maths curriculum and have therefore been combined. To extend year 2 an additional LEARNING OBJECTIVE has been added to help move their learning forward further. The children will revisit the same key knowledge again in the next cycle with the aim that the children will know and remember the key knowledge by the end of year 2. | **Creating media – Digital Photography**  This unit begins the learners’ understanding of how photos are captured and can be manipulated for different purposes. Following this unit, learners will develop their photo editing further in KS2. | **Programming A – Robot Algorithms**  The lessons in this unit build upon Programming A – Programming a robot. Pupils have had some experience of creating short programs and predicting the outcome of a simple program. This unit progresses students’ knowledge and understanding of algorithms and how they are implemented as programs on digital devices. Pupils will spend time looking at how the order of commands affects outcomes. Pupils will use this knowledge and logical reasoning to trace programs and predict outcomes. |
| Y3&4 | **Computer Systems and Networks – Connecting Computers and the Internet**  This combines the year 3 and year 4 units for ‘computer systems and networks’ from Teach Computing and the same pieces of procedural and declarative knowledge are taught in both cycles due to the importance of the knowledge: underpinning the rest of the computing curriculum. It is expected that by the end of year 4 all children will know and remember the key knowledge outlined. | **Creating Media –Frame Animation**  This unit progresses students’ knowledge and understanding of using digital devices to create media, exploring how they can create stop-frame animations. Following this unit, learners will further develop their video editing skills in UKS2 | **Programming A – Sequencing sounds**  This unit assumes that learners will have some prior experience of programming; the KS1 NCCE units cover floor robots and ScratchJr. | **Data – Branching Database**  This unit progresses students’ knowledge and understanding of presenting information. It builds on their knowledge of data and information from key stage 1. They continue to develop their understanding of attributes and begin to construct and interrogate branching databases as a means of displaying and retrieving information. | **Creating Media – Audio Production**  This unit progresses students’ knowledge and understanding of creating media, by focusing on the recording and editing of sound to produce a podcast. Following this unit, learners will explore combining audio with video in the ‘Video editing’ unit in UKS2 | **Programming A – Repetition in shapes**  This unit progresses students’ knowledge and understanding of programming. It progresses from the sequence of commands in a program to using count-controlled loops. Pupils will create algorithms and then implement those algorithms as code. |
| Y5&6 | **Computer Systems and networks – Systems, searching, communication and collaboration**  This combines the year 5 and year 6 units for ‘computer systems and networks’ from Teach Computing and the same pieces of procedural and declarative knowledge are taught in both cycles due to the importance of the knowledge: underpinning the rest of the computing curriculum. It is expected that by the end of year 6 all children will know and remember the key knowledge outlined. | **Creating media – Video Production**  This unit progresses learners’ knowledge and understanding of creating media by guiding them systematically through the process involved in creating a video. By the end of the unit, learners will have developed the skills required to plan, record, edit, and finalise a video. | **Programming A – Selection in physical computing**  This unit assumes that learners will have prior experience of programming using block-based construction (eg Scratch) and understand the concepts of sequence and repetition. | **Data and information – Flat File databases**  This unit progresses pupils’ knowledge and understanding of why and how information might be stored in a database, and looks at how tools within a database can help us to answer questions about our data. It moves on to demonstrate how a database can help us display data visually, and how real-life databases can be used to help us solve problems. Finally, the pupils create a presentation showing understanding and application of all the tools used within the unit. | **Programming A – Variables in games**  This unit assumes that pupils will have some prior experience of programming in Scratch. Specifically, they should be familiar with the programming constructs of sequence, repetition, and selection. These constructs are covered in the Year 3, 4 National Centre for Computing Education programming units respectively. Each year group includes at least one unit that focuses on Scratch. | **Data and information - Spreadsheets**  This unit progresses students’ knowledge and understanding of data, and teaches them how to organise and modify data within spreadsheets. |